

IN THE CLAIMS:

Please find below a listing of all pending claims. The statuses of the claims are set forth in parentheses. For those currently amended claims, underlined emphasis indicates insertions and ~~striketrough~~ emphasis (and/or double brackets) indicates deletions.

1. (previously presented) A control packet processing apparatus for receiving a control packet including a cost value of a communication route and used to exchange a variety of information among devices that support a spanning tree protocol, comprising:

a receiving device receiving the control packet;

a buffer device storing the received control packet; and

a control device autonomously transferring the control packet stored in the buffer device to a processing unit in a specific cycle when no control packet is received for a specific period, thereby preventing the processing unit from re-configuring a topology of a spanning tree.

2. (withdrawn) A control packet processing apparatus for receiving a first control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:

a generation device generating a second control packet indicating stoppage of transmitting the first control packet when transmission of the first control packet is stopped; and

a transmitting device transmitting the generated second control packet to prevent the re-configuration of the communication route of a spanning tree protocol when a receiving side device receives no first control packet for a specific period.

3. (withdrawn) A control packet processing apparatus for receiving a control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:

an input device inputting an instruction to start an automatic transmission of a control packet; and

a transmitting device autonomously transmitting a control packet for a specific period at specific intervals according to the instruction from when a processing unit stops to output a control packet transmit request until the processing unit restarts to output the control packet transmit request.

4. (withdrawn) The control packet processing apparatus according to claim 3, wherein

said input device inputs stop instruction to stop the automatic transmission of the control packet, and

said transmitting device stops autonomously transmitting the control packet according to the stop instruction.

5. (withdrawn) The control packet processing apparatus according to claim 3, further comprising

a table processing device,

wherein

said transmitting device has a table storing a correspondence relationship between an address and a port of a frame transferred according to the spanning tree protocol, and

the table processing device discards a table flush instruction accompanying the re-configuration of the communication route of a spanning tree protocol while said transmitting device is autonomously transmitting the control packet.

6. (withdrawn) The control packet processing apparatus according to claim 3, which prevents another device from detecting a change in the communication route of a spanning tree protocol, and recovers the communication route just before the stoppage of an operation of the processing unit when the processing unit stops or restarts.

7. (withdrawn) The control packet processing apparatus according to claim 3, further comprising a receiving device normally receiving a control packet transmitted by another device while autonomously transmitting the control packet.

8. (withdrawn) The control packet processing apparatus according to claim 7, wherein

said transmitting device monitors a receiving situation of a control packet transmitted from the another device, and stops the transfer of a data frame according to the spanning tree protocol when a change is detected.

9. (withdrawn) The control packet processing apparatus according to claim 7, wherein

said transmitting device monitors a receiving situation of a control packet transmitted from the another device, and initializes the spanning tree protocol when a change is detected.

10. (withdrawn) The control packet processing apparatus according to claim 7, wherein

said transmitting device monitors a receiving situation of a control packet transmitted from the another device, and modifies contents of a control packet autonomously transmitted according to a changed contents when contents of the received control packet change.

11. (previously presented) A storage medium on which is recorded a program for enabling the control packet processing apparatus to receive a control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, said program comprising:

storing the received control packet in a buffer device; and

autonomously transferring the control packet stored in the buffer device to a processing unit in a specific cycle when no control packet is received for a specific period, thereby preventing the processing unit from re-configuring a topology of a spanning tree.

12. (currently amended) The storage medium according to claim 11, wherein said transferring includes ~~generation of~~ generating a pseudo-receiving trigger indicating the reception of a control packet in the specific cycle from when an instruction to stop generating the pseudo-receiving trigger is received until an instruction to stop the generation of the trigger is received, and ~~transfer of~~ transferring the control packet stored in said buffer device to the processing unit every time the pseudo-receiving trigger is generated.

13. (currently amended) The storage medium according to claim 11, wherein said program enables said control packet processing apparatus to start said transferring when said control packet processing apparatus receives a control packet ~~instructing said control packet processing apparatus to stop transmitting~~ transmission stoppage of the control packet.

14. (currently amended) The storage medium according to claim 13, wherein said transferring includes ~~generation of~~ generating a pseudo-receiving trigger indicating the reception of a control packet in the specific cycle, and ~~transfer of~~

transferring the control packet stored in said buffer device to the processing unit every time the pseudo-receiving trigger is generated.

15. (currently amended) The storage medium according to claim 13, wherein said control packet processing apparatus receives a bridge protocol data unit and stores the received bridge protocol data unit as [[a]]the control packet to be stored in said buffer device and receives the control packet instructing the transmission stoppage is a bridge protocol data unit containing a flag instructing a transmission stoppage ~~as the control packet instructing the transmission stoppage.~~

16. (currently amended) The storage medium according to claim 13, wherein said control packet processing apparatus receives a bridge protocol data unit and stores the received bridge protocol data unit as [[a]]the control packet to be stored in said buffer device and receives the control packet instructing the transmission stoppage is another control packet other than the bridge protocol data unit ~~as the control packet instructing the transmission stoppage.~~

17. (currently amended) The storage medium according to claim 13, wherein when said control packet processing apparatus receives a control packet instructing ~~said control packet processing apparatus to restart transmitting~~ transmission restart of the control packet, said program enables said control packet processing apparatus to stop said ~~transfer process~~ transferring.

18. (currently amended) The storage medium according to claim 17, wherein said control packet processing apparatus receives a bridge protocol data unit and stores the received bridge protocol data unit as the control packet to be stored in said buffer device, receives the control packet instructing the transmission stoppage is a bridge protocol data unit containing a flag instructing transmission stoppage ~~as a control packet instructing transmission stoppage and receives the~~

control packet instructing the transmission restart is a bridge protocol data unit containing a flag instructing transmission restart ~~as a control packet instructing transmission restart.~~

19. (currently amended) The storage medium according to claim 17, wherein said control packet processing apparatus receives a bridge protocol data unit and stores the received bridge protocol data unit as the control packet ~~to be stored~~ in said buffer device, and ~~receives each of the control packet instructing the transmission stoppage and the control packet instructing the transmission restart~~ is another control packet other than the bridge protocol data unit ~~as both a control packet instructing transmission stoppage and a control packet instructing transmission restart.~~

20. (previously presented) The storage medium according to claim 13, wherein when said control packet processing apparatus receives a subsequent control packet, said program enables said control packet processing apparatus to stop said transferring.

21. (withdrawn) A storage medium on which is recorded a program for enabling the control packet processing apparatus to receive a first control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, said program comprising:

generating a second control packet indicating stoppage of transmitting the first control packet when transmission of the first control packet is stopped; and
transmitting the generated second control packet to prevent the re-configuration of the communication route of a spanning tree protocol when a receiving side device receives no first control packet for a specific period.

22. (withdrawn) The storage medium according to claim 21, wherein
said control packet processing apparatus transmits a bridge protocol data unit
as the first control packet to be transferred among bridge devices, and generates a
bridge protocol data unit containing a flag instructing a transmission stoppage as the
second control packet.
23. (withdrawn) The storage medium according to claim 21, wherein
said control packet processing apparatus transmits a bridge protocol data unit
as the first control packet to be transferred among bridge devices, and generates
another control packet other than the bridge protocol data unit as the second control
packet.
24. (withdrawn) The storage medium according to claim 21, wherein
when restarting control packet transmission, said program enables said
control packet processing apparatus to further perform generation of a control
packet instructing transmission restart and transmission of the control packet
instructing transmission restart.
25. (withdrawn) The storage medium according to claim 24, wherein
said control packet processing apparatus transmits a bridge protocol data unit
as the first control packet to be transferred among bridge devices, generates a
bridge protocol data unit containing a flag instructing transmission stoppage as the
second control packet and generates a bridge protocol data unit containing a flag
instructing transmission restart as the control packet instructing transmission restart.
26. (withdrawn) The storage medium according to claim 24, wherein
said control packet processing apparatus transmits a bridge protocol data unit
as the first control packet to be transferred among bridge devices, and generates

another control packet other than the bridge protocol data unit as both the second control packet and the control packet instructing transmission restart.

27. (withdrawn) The storage medium according to claim 21, wherein
said program enables said control packet processing apparatus to further
restart the control packet transmission by transmitting a subsequent control packet.

28. (withdrawn) A storage medium on which is recorded a program for enabling
the control packet processing apparatus to receive a control packet including a cost
value of a communication route and used to exchange a variety of information
among bridge devices that support a spanning tree protocol, said program
comprising:

inputting an instruction to start an automatic transmission of a control packet;
and

instructing a transmitting device to autonomously transmit a control packet
for a specific period at specific intervals according to the instruction from when a
processing unit stops to output a control packet transmit request until the processing
unit restarts to output the control packet transmit request.

29. (withdrawn) A storage medium on which is recorded a program for enabling
the control packet processing apparatus to receive a control packet including a cost
value of a communication route and used to exchange a variety of information
among bridge devices that support a spanning tree protocol, said program
comprising

autonomously transmitting a control packet for a specific period at specific
intervals according to an instruction to start an automatic transmission of the control
packet from when a processing unit stops to output a control packet transmit
request until the processing unit restarts to output the control packet transmit
request.

30. (canceled).
31. (canceled).
32. (canceled).
33. (canceled).
34. (previously presented) A control packet processing method for receiving a control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:
- receiving the control packet;
 - storing the received control packet in a buffer device; and
 - autonomously transferring the control packet stored in the buffer device to a processing unit in a specific cycle when no control packet is received for a specific period, thereby preventing the processing unit from re-configuring a topology of a spanning tree.
35. (withdrawn) A control packet processing method for receiving a control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:
- inputting an instruction to start an automatic transmission of a control packet;
 - and
 - autonomously transmitting a control packet for a specific period at specific intervals according to the instruction from when a processing unit stops to output a

control packet transmit request until the processing unit restarts to output the control packet transmit request.

36. (previously presented) A control packet processing apparatus for receiving a control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:

receiving means for receiving the control packet;

buffer means for storing the received control packet; and

control means for autonomously transferring the control packet stored in the buffer means to a processing unit in a specific cycle when no control packet is received for a specific period, thereby preventing the processing unit from re-configuring a topology of a spanning tree.

37. (withdrawn) A control packet processing apparatus for receiving a first control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:

generation means for generating a second control packet indicating stoppage of transmitting the first control packet when transmission of the first control packet is stopped; and

transmitting means for transmitting the generated second control packet to prevent the re-configuration of the communication route of a spanning tree protocol when a receiving side device receives no first control packet for a specific period.

38. (withdrawn) A control packet processing apparatus for receiving a control packet including a cost value of a communication route and used to exchange a variety of information among bridge devices that support a spanning tree protocol, comprising:

input means for inputting an instruction to start an automatic transmission of a control packet; and

transmitting means for autonomously transmitting a control packet for a specific period at specific intervals according to the instruction from when a processing unit stops to output a control packet transmit request until the processing unit restarts to output the control packet transmit request.